* NOTICES *

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the packing bag used for the seasoning for ****** with the easy ejection of contents with a cheap manufacturing cost, a pouch-packed food, cosmetics, a detergent, etc.
[0002]
[Description of the Prior Art] As a packing bag used for the seasoning for ******, a pouch-packed food, cosmetics, a detergent, etc., the ejection of contents is easy, and what can take out contents is called for, maintaining the flow stabilized to the last. as such a thing, the thing (JP,9-30540,A, JP,7-2260,A) in which the notching pour nozzle section was formed is conventionally proposed in what attached hollow cylinder-like nozzles, such as a product made from plastics, in the pour mouth of the elastic packing bag made from a resin film (JP,5-132069,A), the thing (JP,8-2538,A) which formed the hollow (half) cylinder-like pour duct in the elastic packing bag made from a resin film, and the edge of a packing bag
[0003]
[Problem(s) to be Solved by the Invention] however, when putting and carrying out transportation and storage since a special process is needed, and it becomes the cause of a cost rise and the obtained packing bag has hollow cylinder-like a nozzle and a pour duct in order to have attached the hollow cylinder-like nozzle in the elastic packing bag or to have formed the hollow (half) cylinder-like pour duct, it was bulky, and problems, such as needing an excessive space, were Moreover, in some which prepared the pour nozzle section by notching in the packing bag, there was a problem that the ejection of contents became [the pour nozzle section] being easy to bend difficult, at the time of pour.
[0004] Therefore, in case the purpose of this invention can be manufactured without needing a special process, opens a packing bag and takes out contents, it prevents that the pour nozzle section bends, it can take out contents easily, maintaining the flow stabilized to the last, and is to offer the packing bag which moreover is not bulky at the time of transportation or storage.
[0005]
[Means for Solving the Problem] In this invention, it consists of plastic film, and in the packing bag which prepared the pour nozzle section in the packing bag upper part, by preparing notching whose amount of notching from the edge line of a packing bag is 3-10mm in one [at least] side of the pour nozzle section, the trouble of the above-mentioned conventional technology is solved and the packing bag for ****** made into the purpose is obtained.
[0006]
[Embodiments of the Invention] Each thing which especially a limit does not have as plastic film used for the packing bag of this invention, and is usually used for a packing bag is usable. As plastic material suitable for constituting plastic film For example, a crystalline polypropylene and crystalline propylene-ethylene copolymer, The crystalline polybutene -1, the crystalline poly 4-methyl pentene -1, low -, Inside - or a high density polyethylene, an ethylene vinylacetate copolymer (EVA), Polyolefines,

such as an ethylene-ethyl-acrylate copolymer (EEA) and an ion bridge formation olefine copolymer (ionomer); Polystyrene, Aromatic vinyl copolymers, such as a styrene-butadiene copolymer; A polyvinyl chloride, Halogenation vinyl polymerization objects, such as a vinylidene chloride resin; An acrylonitrile styrene copolymer, The nitril polymer like an acrylonitrile-styrene-butadiene copolymer; Nylon 6, Nylon 66, Para, or the polyamides; polyethylene terephthalate like metaxylylene adipamide, polyester [, such as polytetramethylene terephthalate,]; -- various polycarbonate; -- thermoplastics, such as polyacetals, such as a polyoxymethylene, can be mentioned Have not extended the film which consists of these plastic material, or it is used as one shaft or a film which carried out biaxial stretching.

[0007] The plastic film used for the packing bag of this invention is a monolayer about these plastic film, or can carry out the laminating of the two or more sorts, and can constitute them, and can also carry out lamination ****** of one sort of these plastic film or two sorts or more, metallic foils, such as aluminum, paper, the cellophane, etc. The thing of the two-layer structure which makes an outer layer the thing of the two-layer structure which makes an extension nylon film an outer layer, for example, and makes a inner layer polyolefine films, such as a low density polyethylene and polypropylene, as desirable plastic film, and extension polyester film, and makes a polyolefine film a inner layer, the thing of three layer structures which carried out the laminating of the metallic foils, such as aluminum, between outer layer films among these are mentioned. In case these laminated films are manufactured, a support agent can also be made to intervene if needed between each class.

[0008] Whether plastic film is used as a monolayer or it considers as the thing of what lamination use the laminated film of the two-layer structure for what is asked for a low cost like the packing bag for detergent ****** that what is necessary is just to choose according to the character of the contents with which a packing bag is filled up, and it should just use the laminated film containing an aluminum foil of three or more layers for the retort pouches filled up with the contents which need shelf life like a seasoning or a pouch-packed food.

[0009] Hereafter, based on drawing, the feature of the packing bag of this invention is explained further. Drawing 1 is the general drawing showing one example of the packing bag of this invention, and drawing 2 is the general drawing showing other examples of the packing bag of this invention. Drawing 3 is a cross section in the A-A line of the packing bag of drawing 2 , and drawing 4 is the elements on larger scale of the pour nozzle section of the packing bag of drawing 1 . Moreover, drawing 5 - drawing 9 are the elements on larger scale of the pour nozzle section showing other examples of the packing bag of this invention, respectively. And drawing 10 is drawing showing the example of the cross-section configuration of the opening auxiliary mechanism prepared in the pour nozzle section in the packing bag of this invention, and drawing 11 is drawing showing the example of the cross-section configuration of the bending prevention mechanism prepared in pour nozzle circles and/or its near. these drawings -- setting -- a sign 1 -- a packing bag and a sign 2 -- the pour nozzle section and a sign 3 -- notching and a sign 4 -- the heat-sealing section and a sign 5 -- the ****** processing section and a sign 6 -- in a pars basilaris ossis occipitalis and signs 7 and 8, in the side and signs 10 and 11, an intersection and a sign 12 bend by return, in the pars-basilaris-ossis-occipitalis seal section and a sign 13, an opening auxiliary mechanism and a sign 14 bend, and a side attachment wall and

[0010] Although the pour nozzle section 2 is formed above a bag 1 with the packing bag of this invention, as for this pour nozzle section 2, it is desirable to prepare in the corner section of the bag upper part so that drawing 1 may see. In this invention, the amount of notching from the edge line of a packing bag is characterized by preparing notching which is 5-7mm preferably 3-10mm at one [at least] side of the pour nozzle section. The amount of notching from the edge line of a packing bag means the greatest notching depth (L1 or L2 in drawing 4) of the line which extended the upper limit or side edge of a packing bag in the notching section by this invention.

[0011] If this amount of notching becomes larger than 10mm, in case the contents of a packing bag will be poured out, the pour nozzle section bends in the deepest section neighborhood of notching, a pour mouth closes, and pour becomes impossible. Moreover, when the amount of notching is smaller than 3mm, the pour mouth of the pour nozzle section becomes large, and it is hard coming to insert in the

container for ******. Therefore, while preventing that the pour nozzle section bends and being able to insert in the container for ****** easily, in order to be stabilized and to take out contents to the last, it is required to make this amount of notching into the thing of the above-mentioned range.

[0012] This notching may be prepared only in one side of the pour nozzle section, and as seen in drawing 4 , and 6-9, you may prepare it in the both-sides side of the pour nozzle section, so that drawing 5 may see. The configuration of this notching is good also as a straight-line-like thing like [it is good also as a curve-like thing, and] drawing 6 like drawing 4 , and 5, 7-9. What is necessary is just to set up other sizes and configurations of the pour nozzle section suitably according to the size of the kind of contents with which it fills up, and the regio oralis of a container, if the amount of notching is in above-mentioned within the limits.

[0013] There is especially no limit in the configuration of the packing bag of this invention, for example, **** of a three-way-type seal or a four-way-type seal, a standing pouch, etc. are mentioned. Drawing 2 is the general drawing showing one example which applied this invention to the standing pouch, and drawing 3 is a cross section in the A-A line of the standing pouch of drawing 2 . This standing pouch is the bag which formed the heat-sealing section 4 in the both sides of the side attachment walls 7 and 8 of two sheets prolonged in the upper part from reverse V character-like a pars basilaris ossis occipitalis 6 and a pars basilaris ossis occipitalis 6, and is the bag of the independence nature which has the pars-basilaris-ossis-occipitalis seal section 12 of the configuration prolonged in a slanting lower part from the cuff side 9 of a pars basilaris ossis occipitalis 6, and the cuff side 9 inside the intersections 10 and 11 of the heat-sealing section.

[0014] With the packing bag of this invention, the opening auxiliary mechanism 13 can be formed in the pour nozzle section 2 of a packing bag. By forming the opening auxiliary mechanism 13 in the pour nozzle section 2, since it can prevent that the pour nozzle section is shut at the time of pour of contents and the cross section of a pour mouth becomes large, also in contents with high viscosity, pour becomes easy.

[0015] There is especially no limit in a configuration, and the size and the cross-section configuration where it saw from the upper surface of the opening auxiliary mechanism 13, and an abbreviation triangle like drawing 6 , an abbreviation rectangle like drawing 7 , a round shape like drawing 8 , etc. can make it arbitrary configurations as a configuration where it saw from the upper surface at them, for example. Since pour of contents becomes easy much more when the opening auxiliary mechanism 13 is extended and formed in the inner direction in a bag like drawing 6 -9, it is desirable. It can consider as the configuration of a convex at the inside as shown in an outside as especially a limit not had in the cross-section configuration of the opening auxiliary mechanism 13, for example, shown in A-D of drawing 10 at a convex and E. This opening auxiliary mechanism 13 can be formed in the both sides of the plastic film (package material) which forms a packing bag, and can also be formed only in one side of package material so that drawing 10 may see.

[0016] With the packing bag of this invention, it can bend to pour nozzle circles and/or its near further, and the prevention mechanism 14 can be established. By establishing this bending prevention mechanism 14, a pour nozzle bends at the time of pour of contents, it can prevent intercepting passage further and the stable pour direction and the stable amount of pour can be obtained. Moreover, when you may annex with the opening auxiliary mechanism 13 and it annexs with the opening auxiliary mechanism 13, this bending prevention mechanism 14 can adjoin the opening auxiliary mechanism 13, or can be prepared in the interior. There is especially no limit in the number of installation of a bending prevention mechanism, the configuration where it saw from the upper surface, a size, a cross-section configuration, etc., and one piece or two bending prevention mechanisms 14 or more can be established. Moreover, as a configuration seen from the upper surface, a wave-like thing is raised, for example like drawing 7 , a cylindrical thing like drawing 9 , and drawing 8 . These bending prevention mechanisms 14 can also be considered as the composition prepared combining two or more kinds of bending prevention mechanisms 14 in which configurations differ not only like one kind of thing but like drawing 9 . As a cross-section configuration of the bending prevention mechanism 14, a thing as shown, for example in F, G, and H of drawing 11 is

mentioned.
[0017] Further, drawing 12 - drawing 15 are drawings showing other examples of this invention, bend in the opening auxiliary mechanism 13, and establish the prevention mechanism 14. In the example of drawing 12 , the opening auxiliary mechanism 13 is made into a herringbone, it bends in a core and its both-sides lower part, and the prevention mechanism 14 is established. Moreover, in the example of drawing 13 , the perpendicular drawn on the base from the vertical angle receives horizontally, it is made for the tilt angle of the opening auxiliary triangle-like mechanism 13 to become 40 - 50 degrees, and the bending prevention mechanism 14 is mostly formed in parallel along with two sides of the both sides. And as the cross section is shown in drawing 14 , the narrow bending prevention mechanism 14 is established in the broad opening auxiliary mechanism 13. In addition, in these examples, although the opening auxiliary mechanism 13 was made into the shape of a herringbone or a triangle, it is possible to adopt the proper configuration of the shape of the shape of a rhombus and an ellipse, and it is possible to choose suitably the appearance configuration of the bending prevention mechanism 14, a cross-section configuration, the angle to prepare, and to adopt them. Furthermore, as shown in drawing 15 , it is also possible to crush the bending prevention mechanism 14, or to heat seal the inner layer of the bending prevention mechanism 14, and to raise intensity.
[0018] What is necessary is to just be based on the method of heat sealing the package material which pierces after heat sealing the plastic film (package material) which especially a limit does not have in the method of preparing notching in the side of the pour nozzle section of the packing bag of this invention, for example, constitutes a packing bag by the conventional method, and is cut with an edge etc. and which prepared notching beforehand.
[0019] Moreover, although the method of heating before manufacturing the package material which constitutes a packing bag, and carrying out deep-drawing fabrication using a method, a vacuum, the compressed air, etc. which push and carry out embossing of the fixture of a request configuration, and cooling after that can be used in order to prepare an opening auxiliary mechanism and a bending prevention mechanism in the packing bag of this invention, the method of carrying out embossing from the simple nature of operation is desirable. In this case, the fixture of a request configuration other than the method of heating package material can also be heated by various methods like high-frequency heating or heater heating. The package material which established the opening auxiliary mechanism and/or the bending prevention mechanism manufactures bags by the bag sealer, contents are heat sealed, and the need seals the restoration mouth after restoration.
[0020] In order to make opening of a packing bag easy, the ****** processing section 5 can be formed in the pour nozzle section 2 of the packing bag of this invention. As such the ****** processing section, the notch of I form formed in a bag edge, for example or a V type, the perforation which crosses the pour nozzle section and a score, and the other light-gage weakening processing sections are mentioned. As a method of forming such the ****** processing section, electron discharge methods with machining, (3) heat bar, etc. by (1) laser processing, (2) cutters, the grinding stone, etc., such as thermoforming, (4) corona discharge, and plasma electric discharge, etc. are mentioned. Since contents will leak depending on the kind of contents with which a packing bag is filled up if it forms the ****** processing section which penetrates plastic film completely in forming the ****** processing section like a perforation or a score which crosses the pour nozzle section, or the shatter strength after contents restoration falls, it is not desirable. In such a case, it is desirable to prevent generating of such a problem by giving ****** processing only to the outer layer film which constitutes a laminated film, for example etc. Moreover, when preparing a perforation and a score, it is desirable to prepare in the right-angled direction, i.e., a horizontal direction, to the vertical axis of a packing bag in respect of the ease of pouring.
[0021] Formation of the ****** processing section can be performed simultaneously with for example, slitter processing, and can also be performed at the time of bag manufacture by the bag sealer. Moreover, it can also carry out to the film which constitutes an outer layer before the lamination of a laminated film beforehand. As contents with which a packing bag is filled up, the seasoning of the shape of not only a liquefied thing but the powder been smooth or granulatio, a pouch-packed food, cosmetics, and

detergents are mentioned.

[0022]

[Example] Next, although an example explains this invention, these examples do not limit this invention. (Examples 1-9) a biaxial-stretching nylon film with a thickness of 15micro and a line with a thickness of 130micro -- to the laminated film which laminated the low-density-polyethylene (LLDPE) film through the support agent of an urethane system, notching of the configuration of drawing 4 was formed in the side of the portion which serves as a pour nozzle after bag manufacture at the time of bag manufacture, and it heat sealed by the conventional method, and sealed after being filled up with liquid detergent and a body shampoo to it The amounts L1 and L2 of notching from the edge line of a packing bag were changed, and examples 1-3 considered the relation between the amount of notching, and the pour situation at the time of pour. An opening auxiliary mechanism and a bending prevention mechanism as shown in drawing 7 at the time of bag manufacture were added, L1 and L2 were changed like examples 1-3, and examples 4-9 estimated the pour situation. A result is shown in Table 1. In Table 1, the width of face of an opening auxiliary mechanism or a bending prevention mechanism means D [in / this drawing / for W in drawing 16 / in the depth] again.

[0023]

[Table 1]

	上面切り欠き L_1(mm)	側面切り欠き L_2(mm)	開口補助機構 (幅×深さmm)	折れ曲がり防止機構 (幅×深さmm)	ノズル部の折れ曲がり	中身のこぼれ	注出時間（秒） 洗剤（250ml）	注出時間（秒） シャンプー（400ml）
例1	3	3	なし	なし	なし	なし	18	27
2	6	6	〃	〃	〃	〃	15	26
3	10	10	〃	〃	〃	〃	16	26
4	3	3	10×8	2×2	〃	〃	10	20
5	5	6	〃	〃	〃	〃	11	19
6	7	10	〃	〃	〃	〃	10	21
7	3	0	〃	〃	〃	〃	10	23
8	6	0	〃	〃	〃	〃	11	22
9	10	0	〃	〃	〃	〃	11	24
例1	0	0	なし	なし	ボトル挿入不可	あり	13	32
2	1	0	〃	〃	〃	〃	15	35
3	15	0	〃	〃	ノズル折曲がり	なし	25	45
4	20	0	〃	〃	〃	〃	30	88

[0024] As shown in Table 1, when the amount of notching was set up in the range of this invention in the result of examples 1-3, moving was completed without spilling, since the nozzle section is repacked and it can insert in a bottle mouth. Moreover, the nozzle section did not bend but the put substitute was performed quickly. In the result of examples 4-9, since there were an opening auxiliary mechanism and a bending prevention mechanism, the part and pour time when there is no the nozzle section's bending at at the time of pour, and the nozzle cross section is large were shortened. It became clear that it prevents that the nozzle section of a packing bag bends according to this invention, and moving of contents can be easily performed from these results.

[0025] (Example of comparison) Notching was formed in the side of the portion which serves as a pour nozzle after bag manufacture by the same method as an example at the time of bag manufacture, and it heat sealed by the conventional method, and sealed after being filled up with liquid detergent and a body shampoo. The amounts L1 and L2 of notching from the edge line of a packing bag were changed, and the relation between the amount of notching and the pour situation at the time of pour was considered. A result is shown in Table 1. From the result of Table 1, with the packing bag of this invention out of range, contents were spilt without having repacked the pour nozzle and being able to insert into a bottle, or the nozzle section bent, and a put substitute was not performed easily.

[0026] It cannot be overemphasized that it is not what is limited to what can choose broadly the thickness of each film which constitutes the plastic film used as the package material of the packing bag of this invention, a kind, combination, etc. according to the character of the packing bag for ****** made into the purpose, and was indicated by each above-mentioned example.

[0027]

[Effect of the Invention] By preparing notching whose amount of notching from the edge line of a packing bag is 3-10mm, the packing bag of this invention prevents that a pour nozzle bends at the time of pour of contents, and to the last, contents with high viscosity are also easily stabilized on one [at least] side of the pour nozzle section, and can pour it out on it. Moreover, since a pour nozzle can be inserted easily and it can fix in the container for ******, it can pour out, without spilling contents. Furthermore, while being able to form the large pour mouth of the cross section easily by preparing an opening auxiliary mechanism in a packing bag at the time of opening, it prevents further that a pour mouth bends by establishing a bending prevention mechanism, and contents can be taken out easily, maintaining the flow stabilized to the last. Moreover, by being able to manufacture cheaply, without needing a special process, not being bulky at the time of transportation or storage, either, and preparing the ****** processing section in the pour nozzle section, it becomes possible to open easily by hand, and practical value is very high.

[Translation done.]

(19) JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **11020837 A**

(43) Date of publication of application: **26 . 01 . 99**

(51) Int. Cl **B65D 33/38**

(21) Application number: **09190744**

(22) Date of filing: **02 . 07 . 97**

(71) Applicant: **TOYO SEIKAN KAISHA LTD**

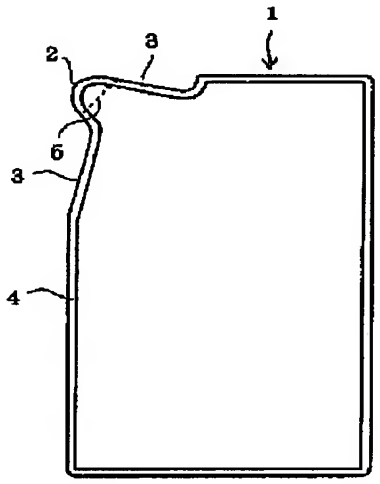
(72) Inventor: **AKITOSHI HIROSHI**
YASUMURO HISAKAZU

(54) PACKAGE BAG WITH DISCHARGE FUNCTION

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a package bag which can be produced without requiring a special process, prevents a bend in a discharging nozzle part when its contents are taken out after the package bag is unsealed, lets out the contents easily while maintaining a steady flow to the last bit of the contents, and, further, does not take much space when transported and stored.

SOLUTION: In a package bag made of plastic film and having a discharging nozzle part 2 in the upper part of the bag, an indentation 3 which is 3-10 mm in amount from the edge of the end of the package bag is made at least at one of the sides of the discharging nozzle. The plastic film used here is not limited in particular, and any one which is commonly used for the package bag can be used.



* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] this invention relates to the packing bag used for the seasoning for ****** with the easy ejection of contents with a cheap manufacturing cost, a pouch-packed food, cosmetics, a detergent, etc.
[0002]
[Description of the Prior Art] As a packing bag used for the seasoning for ******, a pouch-packed food, cosmetics, a detergent, etc., the ejection of contents is easy, and what can take out contents is called for, maintaining the flow stabilized to the last. as such a thing, the thing (JP,9-30540,A, JP,7-2260,A) in which the notching pour nozzle section was formed is conventionally proposed in what attached hollow cylinder-like nozzles, such as a product made from plastics, in the pour mouth of the elastic packing bag made from a resin film (JP,5-132069,A), the thing (JP,8-2538,A) which formed the hollow (half) cylinder-like pour duct in the elastic packing bag made from a resin film, and the edge of a packing bag
[0003]
[Problem(s) to be Solved by the Invention] however, when putting and carrying out transportation and storage since a special process is needed, and it becomes the cause of a cost rise and the obtained packing bag has hollow cylinder-like a nozzle and a pour duct in order to have attached the hollow cylinder-like nozzle in the elastic packing bag or to have formed the hollow (half) cylinder-like pour duct, it was bulky, and problems, such as needing an excessive space, were Moreover, in some which prepared the pour nozzle section by notching in the packing bag, there was a problem that the ejection of contents became [the pour nozzle section] being easy to bend difficult, at the time of pour.
[0004] Therefore, in case the purpose of this invention can be manufactured without needing a special process, opens a packing bag and takes out contents, it prevents that the pour nozzle section bends, it can take out contents easily, maintaining the flow stabilized to the last, and is to offer the packing bag which moreover is not bulky at the time of transportation or storage.
[0005]
[Means for Solving the Problem] In this invention, it consists of plastic film, and in the packing bag which prepared the pour nozzle section in the packing bag upper part, by preparing notching whose amount of notching from the edge line of a packing bag is 3-10mm in one [at least] side of the pour nozzle section, the trouble of the above-mentioned conventional technology is solved and the packing bag for ****** made into the purpose is obtained.
[0006]
[Embodiments of the Invention] Each thing which especially a limit does not have as plastic film used for the packing bag of this invention, and is usually used for a packing bag is usable. As plastic material suitable for constituting plastic film For example, a crystalline polypropylene and crystalline propylene-ethylene copolymer, The crystalline polybutene -1, the crystalline poly 4-methyl pentene -1, low -, Inside - or a high density polyethylene, an ethylene vinylacetate copolymer (EVA), Polyolefines, such as an ethylene-ethyl-acrylate copolymer (EEA) and an ion bridge formation olefine copolymer

(ionomer); Polystyrene, Aromatic vinyl copolymers, such as a styrene-butadiene copolymer; A polyvinyl chloride, Halogenation vinyl polymerization objects, such as a vinylidene chloride resin; An acrylonitrile styrene copolymer, The nitril polymer like an acrylonitrile-styrene-butadiene copolymer; Nylon 6, Nylon 66, Para, or the polyamides; polyethylene terephthalate like metaxylylene adipamide, polyester [, such as polytetramethylene terephthalate,]; -- various polycarbonate; -- thermoplastics, such as polyacetals, such as a polyoxymethylene, can be mentioned Have not extended the film which consists of these plastic material, or it is used as one shaft or a film which carried out biaxial stretching.

[0007] The plastic film used for the packing bag of this invention is a monolayer about these plastic film, or can carry out the laminating of the two or more sorts, and can constitute them, and can also carry out lamination ****** of one sort of these plastic film or two sorts or more, metallic foils, such as aluminum, paper, the cellophane, etc. The thing of the two-layer structure which makes an outer layer the thing of the two-layer structure which makes an extension nylon film an outer layer, for example, and makes a inner layer polyolefine films, such as a low density polyethylene and polypropylene, as desirable plastic film, and extension polyester film, and makes a polyolefine film a inner layer, the thing of three layer structures which carried out the laminating of the metallic foils, such as aluminum, between outer layer films among these are mentioned. In case these laminated films are manufactured, a support agent can also be made to intervene if needed between each class.

[0008] Whether plastic film is used as a monolayer or it considers as the thing of what lamination use the laminated film of the two-layer structure for what is asked for a low cost like the packing bag for detergent ****** that what is necessary is just to choose according to the character of the contents with which a packing bag is filled up, and it should just use the laminated film containing an aluminum foil of three or more layers for the retort pouches filled up with the contents which need shelf life like a seasoning or a pouch-packed food.

[0009] Hereafter, based on drawing, the feature of the packing bag of this invention is explained further. Drawing 1 is the general drawing showing one example of the packing bag of this invention, and drawing 2 is the general drawing showing other examples of the packing bag of this invention. Drawing 3 is a cross section in the A-A line of the packing bag of drawing 2 , and drawing 4 is the elements on larger scale of the pour nozzle section of the packing bag of drawing 1 . Moreover, drawing 5 - drawing 9 are the elements on larger scale of the pour nozzle section showing other examples of the packing bag of this invention, respectively. And drawing 10 is drawing showing the example of the cross-section configuration of the opening auxiliary mechanism prepared in the pour nozzle section in the packing bag of this invention, and drawing 11 is drawing showing the example of the cross-section configuration of the bending prevention mechanism prepared in pour nozzle circles and/or its near. these drawings -- setting -- a sign 1 -- a packing bag and a sign 2 -- the pour nozzle section and a sign 3 -- notching and a sign 4 -- the heat-sealing section and a sign 5 -- the ****** processing section and a sign 6 -- in a pars basilaris ossis occipitalis and signs 7 and 8, in the side and signs 10 and 11, an intersection and a sign 12 bend by return, in the pars-basilaris-ossis-occipitalis seal section and a sign 13, an opening auxiliary mechanism and a sign 14 bend, and a side attachment wall and

[0010] Although the pour nozzle section 2 is formed above a bag 1 with the packing bag of this invention, as for this pour nozzle section 2, it is desirable to prepare in the corner section of the bag upper part so that drawing 1 may see. In this invention, the amount of notching from the edge line of a packing bag is characterized by preparing notching which is 5-7mm preferably 3-10mm at one [at least] side of the pour nozzle section. The amount of notching from the edge line of a packing bag means the greatest notching depth (L1 or L2 in drawing 4) of the line which extended the upper limit or side edge of a packing bag in the notching section by this invention.

[0011] If this amount of notching becomes larger than 10mm, in case the contents of a packing bag will be poured out, the pour nozzle section bends in the deepest section neighborhood of notching, a pour mouth closes, and pour becomes impossible. Moreover, when the amount of notching is smaller than 3mm, the pour mouth of the pour nozzle section becomes large, and it is hard coming to insert in the container for ******. Therefore, while preventing that the pour nozzle section bends and being able to insert in the container for ****** easily, in order to be stabilized and to take out contents to the last, it is required to

make this amount of notching into the thing of the above-mentioned range.
[0012] This notching may be prepared only in one side of the pour nozzle section, and as seen in drawing 4 , and 6-9, you may prepare it in the both-sides side of the pour nozzle section, so that drawing 5 may see. The configuration of this notching is good also as a straight-line-like thing like [it is good also as a curve-like thing, and] drawing 6 like drawing 4 , and 5, 7-9. What is necessary is just to set up other sizes and configurations of the pour nozzle section suitably according to the size of the kind of contents with which it fills up, and the regio oralis of a container, if the amount of notching is in above-mentioned within the limits.
[0013] There is especially no limit in the configuration of the packing bag of this invention, for example, **** of a three-way-type seal or a four-way-type seal, a standing pouch, etc. are mentioned. Drawing 2 is the general drawing showing one example which applied this invention to the standing pouch, and drawing 3 is a cross section in the A-A line of the standing pouch of drawing 2 . This standing pouch is the bag which formed the heat-sealing section 4 in the both sides of the side attachment walls 7 and 8 of two sheets prolonged in the upper part from reverse V character-like a pars basilaris ossis occipitalis 6 and a pars basilaris ossis occipitalis 6, and is the bag of the independence nature which has the pars-basilaris-ossis-occipitalis seal section 12 of the configuration prolonged in a slanting lower part from the cuff side 9 of a pars basilaris ossis occipitalis 6, and the cuff side 9 inside the intersections 10 and 11 of the heat-sealing section.
[0014] With the packing bag of this invention, the opening auxiliary mechanism 13 can be formed in the pour nozzle section 2 of a packing bag. By forming the opening auxiliary mechanism 13 in the pour nozzle section 2, since it can prevent that the pour nozzle section is shut at the time of pour of contents and the cross section of a pour mouth becomes large, also in contents with high viscosity, pour becomes easy.
[0015] There is especially no limit in a configuration, and the size and the cross-section configuration where it saw from the upper surface of the opening auxiliary mechanism 13, and an abbreviation triangle like drawing 6 , an abbreviation rectangle like drawing 7 , a round shape like drawing 8 , etc. can make it arbitrary configurations as a configuration where it saw from the upper surface at them, for example. Since pour of contents becomes easy much more when the opening auxiliary mechanism 13 is extended and formed in the inner direction in a bag like drawing 6 -9, it is desirable. It can consider as the configuration of a convex at the inside as shown in an outside as especially a limit not had in the cross-section configuration of the opening auxiliary mechanism 13, for example, shown in A-D of drawing 10 at a convex and E. This opening auxiliary mechanism 13 can be formed in the both sides of the plastic film (package material) which forms a packing bag, and can also be formed only in one side of package material so that drawing 10 may see.
[0016] With the packing bag of this invention, it can bend to pour nozzle circles and/or its near further, and the prevention mechanism 14 can be established. By establishing this bending prevention mechanism 14, a pour nozzle bends at the time of pour of contents, it can prevent intercepting passage further and the stable pour direction and the stable amount of pour can be obtained. Moreover, when you may annex with the opening auxiliary mechanism 13 and it annexs with the opening auxiliary mechanism 13, this bending prevention mechanism 14 can adjoin the opening auxiliary mechanism 13, or can be prepared in the interior. There is especially no limit in the number of installation of a bending prevention mechanism, the configuration where it saw from the upper surface, a size, a cross-section configuration, etc., and one piece or two bending prevention mechanisms 14 or more can be established. Moreover, as a configuration seen from the upper surface, a wave-like thing is raised, for example like drawing 7 , a cylindrical thing like drawing 9 , and drawing 8 . These bending prevention mechanisms 14 can also be considered as the composition prepared combining two or more kinds of bending prevention mechanisms 14 in which configurations differ not only like one kind of thing but like drawing 9 . As a cross-section configuration of the bending prevention mechanism 14, a thing as shown, for example in F, G, and H of drawing 11 is mentioned.
[0017] Further, drawing 12 - drawing 15 are drawings showing other examples of this invention, bend in the opening auxiliary mechanism 13, and establish the prevention mechanism 14. In the example of

drawing 12 , the opening auxiliary mechanism 13 is made into a herringbone, it bends in a core and its both-sides lower part, and the prevention mechanism 14 is established. Moreover, in the example of drawing 13 , the perpendicular drawn on the base from the vertical angle receives horizontally, it is made for the tilt angle of the opening auxiliary triangle-like mechanism 13 to become 40 - 50 degrees, and the bending prevention mechanism 14 is mostly formed in parallel along with two sides of the both sides. And as the cross section is shown in drawing 14 , the narrow bending prevention mechanism 14 is established in the broad opening auxiliary mechanism 13. In addition, in these examples, although the opening auxiliary mechanism 13 was made into the shape of a herringbone or a triangle, it is possible to adopt the proper configuration of the shape of the shape of a rhombus and an ellipse, and it is possible to choose suitably the appearance configuration of the bending prevention mechanism 14, a cross-section configuration, the angle to prepare, and to adopt them. Furthermore, as shown in drawing 15 , it is also possible to crush the bending prevention mechanism 14, or to heat seal the inner layer of the bending prevention mechanism 14, and to raise intensity.

[0018] What is necessary is to just be based on the method of heat sealing the package material which pierces after heat sealing the plastic film (package material) which especially a limit does not have in the method of preparing notching in the side of the pour nozzle section of the packing bag of this invention, for example, constitutes a packing bag by the conventional method, and is cut with an edge etc. and which prepared notching beforehand.

[0019] Moreover, although the method of heating before manufacturing the package material which constitutes a packing bag, and carrying out deep-drawing fabrication using a method, a vacuum, the compressed air, etc. which push and carry out embossing of the fixture of a request configuration, and cooling after that can be used in order to prepare an opening auxiliary mechanism and a bending prevention mechanism in the packing bag of this invention, the method of carrying out embossing from the simple nature of operation is desirable. In this case, the fixture of a request configuration other than the method of heating package material can also be heated by various methods like high-frequency heating or heater heating. The package material which established the opening auxiliary mechanism and/or the bending prevention mechanism manufactures bags by the bag sealer, contents are heat sealed, and the need seals the restoration mouth after restoration.

[0020] In order to make opening of a packing bag easy, the ****** processing section 5 can be formed in the pour nozzle section 2 of the packing bag of this invention. As such the ****** processing section, the notch of I form formed in a bag edge, for example or a V type, the perforation which crosses the pour nozzle section and a score, and the other light-gage weakening processing sections are mentioned. As a method of forming such the ****** processing section, electron discharge methods with machining, (3) heat bar, etc. by (1) laser processing, (2) cutters, the grinding stone, etc., such as thermoforming, (4) corona discharge, and plasma electric discharge, etc. are mentioned. Since contents will leak depending on the kind of contents with which a packing bag is filled up if it forms the ****** processing section which penetrates plastic film completely in forming the ****** processing section like a perforation or a score which crosses the pour nozzle section, or the shatter strength after contents restoration falls, it is not desirable. In such a case, it is desirable to prevent generating of such a problem by giving ****** processing only to the outer layer film which constitutes a laminated film, for example etc. Moreover, when preparing a perforation and a score, it is desirable to prepare in the right-angled direction, i.e., a horizontal direction, to the vertical axis of a packing bag in respect of the ease of pouring.

[0021] Formation of the ****** processing section can be performed simultaneously with for example, slitter processing, and can also be performed at the time of bag manufacture by the bag sealer. Moreover, it can also carry out to the film which constitutes an outer layer before the lamination of a laminated film beforehand. As contents with which a packing bag is filled up, the seasoning of the shape of not only a liquefied thing but the powder been smooth or granulatio, a pouch-packed food, cosmetics, and detergents are mentioned.

[0022]

[Example] Next, although an example explains this invention, these examples do not limit this invention. (Examples 1-9) a biaxial-stretching nylon film with a thickness of 15micro and a line with a thickness of

130micro -- to the laminated film which laminated the low-density-polyethylene (LLDPE) film through the support agent of an urethane system, notching of the configuration of drawing 4 was formed in the side of the portion which serves as a pour nozzle after bag manufacture at the time of bag manufacture, and it heat sealed by the conventional method, and sealed after being filled up with liquid detergent and a body shampoo to it The amounts L1 and L2 of notching from the edge line of a packing bag were changed, and examples 1-3 considered the relation between the amount of notching, and the pour situation at the time of pour. An opening auxiliary mechanism and a bending prevention mechanism as shown in drawing 7 at the time of bag manufacture were added, L1 and L2 were changed like examples 1-3, and examples 4-9 estimated the pour situation. A result is shown in Table 1. In Table 1, the width of face of an opening auxiliary mechanism or a bending prevention mechanism means D [in / this drawing / for W in drawing 16 / in the depth] again.

[0023]

[Table 1]

	上面切り欠き L_1 (mm)	側面切り欠き L_2 (mm)	開口補助機構 (幅×深さmm)	折れ曲がり防止機構 (幅×深さmm)	ノズル部の折れ曲がり	中身のこぼれ	注出時間 (秒) 洗剤 (250ml)	注出時間 (秒) シャンプー (400ml)
実施例1	3	3	なし	なし	なし	なし	18	27
2	6	6	〃	〃	〃	〃	15	26
3	10	10	〃	〃	〃	〃	16	26
4	3	3	10×8	2×2	〃	〃	10	20
5	5	6	〃	〃	〃	〃	11	18
6	7	10	〃	〃	〃	〃	10	21
7	3	0	〃	〃	〃	〃	10	23
8	6	0	〃	〃	〃	〃	11	22
9	10	0	〃	〃	〃	〃	11	24
比較例1	0	0	なし	なし	ボトル挿入不可	あり	13	32
2	1	0	〃	〃	〃	〃	15	35
3	15	0	〃	〃	ノズル折曲がり	なし	25	45
4	20	0	〃	〃	〃	〃	30	88

[0024] As shown in Table 1, when the amount of notching was set up in the range of this invention in the result of examples 1-3, moving was completed without spilling, since the nozzle section is repacked and it can insert in a bottle mouth. Moreover, the nozzle section did not bend but the put substitute was performed quickly. In the result of examples 4-9, since there were an opening auxiliary mechanism and a bending prevention mechanism, the part and pour time when there is no the nozzle section's bending at at the time of pour, and the nozzle cross section is large were shortened. It became clear that it prevents that the nozzle section of a packing bag bends according to this invention, and moving of contents can be easily performed from these results.

[0025] (Example of comparison) Notching was formed in the side of the portion which serves as a pour nozzle after bag manufacture by the same method as an example at the time of bag manufacture, and it heat sealed by the conventional method, and sealed after being filled up with liquid detergent and a body shampoo. The amounts L1 and L2 of notching from the edge line of a packing bag were changed, and the relation between the amount of notching and the pour situation at the time of pour was considered. A result is shown in Table 1. From the result of Table 1, with the packing bag of this invention out of range, contents were spilt without having repacked the pour nozzle and being able to insert into a bottle, or the nozzle section bent, and a put substitute was not performed easily.

[0026] It cannot be overemphasized that it is not what is limited to what can choose broadly the thickness of each film which constitutes the plastic film used as the package material of the packing bag of this invention, a kind, combination, etc. according to the character of the packing bag for ****** made into the purpose, and was indicated by each above-mentioned example.

[0027]

[Effect of the Invention] By preparing notching whose amount of notching from the edge line of a packing bag is 3-10mm, the packing bag of this invention prevents that a pour nozzle bends at the time of pour of contents, and to the last, contents with high viscosity are also easily stabilized on one [at least] side of the pour nozzle section, and can pour it out on it. Moreover, since a pour nozzle can be inserted easily and it can fix in the container for ******, it can pour out, without spilling contents. Furthermore, while being able to form the large pour mouth of the cross section easily by preparing an opening auxiliary mechanism in a packing bag at the time of opening, it prevents further that a pour mouth bends by establishing a bending prevention mechanism, and contents can be taken out easily, maintaining the flow stabilized to the last. Moreover, by being able to manufacture cheaply, without needing a special process, not being bulky at the time of transportation or storage, either, and preparing the ****** processing section in the pour nozzle section, it becomes possible to open easily by hand, and practical value is very high.

[Translation done.]

* NOTICES *

1. This document has been translated by computer.So the translation may not reflect the original precisely.

2. **** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1] The packing bag with a pour function with which the pour nozzle section is characterized by having notching whose amount of notching from the edge line of a packing bag is 3-10mm on one [at least] side in the packing bag which consisted of plastic film and prepared the pour nozzle section in the packing bag upper part.
[Claim 2] The packing bag with a pour function according to claim 1 characterized by the pour nozzle section having notching in a both-sides side.
[Claim 3] The packing bag with a pour function according to claim 1 or 2 characterized by establishing the opening auxiliary mechanism formed in pour nozzle circles of embossing.
[Claim 4] A packing bag with a pour function given in any 1 term of the claims 1-3 characterized by the thing which was formed in pour nozzle circles and/or its near of embossing, and which bent and established the prevention mechanism.
[Claim 5] A packing bag with a pour function given in any 1 term of the claims 1-4 characterized by preparing the ****** processing section in the opening schedule section of the pour nozzle section.
[Claim 6] The packing bag with a pour function according to claim 5 characterized by forming the ****** processing section in the outer layer film of the packing bag with which the outer layer film was formed of the plastics laminated film which a Nylon or polyester resin, and a inner layer film become from polyolefin resin.
[Claim 7] A packing bag with a pour function given in any 1 term of the claims 1-6 to which a packing bag with a pour function is characterized by being the standing pouch which prepared the pars-basilaris-ossis-occipitalis seal section of the configuration prolonged in a slanting lower part from the cuff side of a pars basilaris ossis occipitalis, and the cuff side inside the intersection of the heat-sealing section with the bag which prepared the heat-sealing section in the both sides of the side attachment wall of two sheets prolonged in the upper part from reverse V character-like a pars basilaris ossis occipitalis and this pars basilaris ossis occipitalis.

[Translation done.]

(19)日本国特許庁（ＪＰ）　(12)公開特許公報（Ａ）　(11)特許出願公開番号

特開平11－20837

(43)公開日　平成11年(1999)１月26日

(51)Int.Cl.[6]	識別記号	ＦＩ
Ｂ６５Ｄ　33/38		Ｂ６５Ｄ　33/38

審査請求　未請求　請求項の数７　ＦＤ　（全　７　頁）

(21)出願番号　特願平9－190744

(22)出願日　平成９年(1997)７月２日

(71)出願人　000003768
東洋製罐株式会社
東京都千代田区内幸町１丁目３番１号

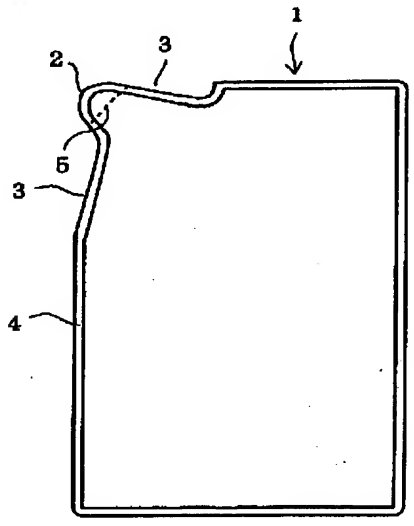
(72)発明者　稚利　洋
神奈川県三浦郡葉山町長柄839－１

(72)発明者　安室　久和
神奈川県横浜市磯子区中浜町４－14

(74)代理人　弁理士　芳村　武彦

(54)【発明の名称】　注出機能付き包装袋

(57)【要約】
【課題】特別な工程を必要とせずに製造することができ、包装袋を開封して内容物を取り出す際に、注出ノズル部の折れ曲がりを防止し、最後まで安定した流れを保ちながら内容物を容易に取り出すことができ、しかも輸送や保管時にかさばらない包装袋を提供する。
【解決手段】プラスチックフイルムからなり、包装袋上方に注出ノズル部を設けた包装袋において、注出ノズル部の少なくとも一方の側面に、包装袋の端縁線からの切り欠き量が３～１０ｍｍである切り欠きを設ける。



1

【特許請求の範囲】

【請求項１】プラスチックフイルムからなり、包装袋上方に注出ノズル部を設けた包装袋において、注出ノズル部が少なくとも一方の側面に、包装袋の端縁線からの切り欠き量が３～１０ｍｍである切り欠きを有することを特徴とする注出機能付き包装袋。

【請求項２】注出ノズル部が両側面に切り欠きを有することを特徴とする請求項１に記載の注出機能付き包装袋。

【請求項３】注出ノズル部内に、エンボス加工により形成された開口補助機構を設けたことを特徴とする請求項１又は２に記載の注出機能付き包装袋。

【請求項４】注出ノズル部内及び／又はその近傍に、エンボス加工により形成された折れ曲がり防止機構を設けたことを特徴とする請求項１～３のいずれか１項に記載の注出機能付き包装袋。

【請求項５】注出ノズル部の開封予定部に、易開封加工部を設けたことを特徴とする請求項１～４のいずれか１項に記載の注出機能付き包装袋。

【請求項６】外層フイルムがナイロン樹脂又はポリエステル樹脂、内層フイルムがポリオレフィン樹脂からなるプラスチック積層フイルムにより形成された包装袋の、外層フイルムに易開封加工部が形成されていることを特徴とする請求項５に記載の注出機能付き包装袋。

【請求項７】注出機能付き包装袋が、逆Ｖ字状の底部と該底部から上方に延びる２枚の側壁の両側にヒートシール部を設けた袋で、底部の折返し辺とヒートシール部の交点の内側の折返し辺から斜め下方に延びる形状の底部シール部を設けた自立性袋であることを特徴とする請求項１～６のいずれか１項に記載の注出機能付き包装袋。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は、製造コストが安く内容物の取り出しが容易な、詰替え用の調味料、レトルト食品、化粧品や洗剤等に用いられる包装袋に関する。

【０００２】

【従来の技術】詰替え用の調味料、レトルト食品、化粧品、洗剤等に用いられる包装袋としては、内容物の取り出しが容易で最後まで安定した流れを保ちながら内容物を取り出すことができるものが求められている。このようなものとして、従来、軟質の樹脂フイルム製包装袋の注出口にプラスチック製等の中空円筒状ノズルを取り付けたもの（特開平５－１３２０６９号公報）、軟質の樹脂フイルム製包装袋に中空（半）円筒状の注出管路を形成したもの（特開平８－２５３８号公報）や、包装袋の端縁を切り欠き注出ノズル部を形成したもの（特開平９－３０５４０号公報、特開平７－２２６０号公報）が提案されている。

【０００３】

【発明が解決しようとする課題】しかしながら、軟質の包装袋に中空円筒状ノズルを取り付けたり、中空（半）円筒状の注出管路を形成するには、特別な工程を必要としコストアップの原因となり、また得られた包装袋が中空円筒状のノズルや注出管路を有するために、積重ねて輸送や保管をする際にかさばり余分なスペースを必要とする等の問題があった。また、包装袋に切り欠きによる注出ノズル部を設けたものでは、注出時に注出ノズル部が折れ曲がりやすく内容物の取り出しが困難になるという問題があった。

2

【０００４】したがって、本発明の目的は、特別な工程を必要とせずに製造することができ、包装袋を開封して内容物を取り出す際に、注出ノズル部の折れ曲がりを防止し、最後まで安定した流れを保ちながら内容物を容易に取り出すことができ、しかも輸送や保管時にかさばらない包装袋を提供することにある。

【０００５】

【課題を解決するための手段】本発明では、プラスチックフイルムからなり、包装袋上方に注出ノズル部を設けた包装袋において、注出ノズル部の少なくとも一方の側面に、包装袋の端縁線からの切り欠き量が３～１０ｍｍである切り欠きを設けることによって、上記従来技術の問題点を解決し、目的とする詰替え用包装袋を得るものである。

【０００６】

【発明の実施の形態】本発明の包装袋に使用するプラスチックフイルムとしては特に制限はなく、通常包装袋に用いられるものはいずれも使用可能である。プラスチックフイルムを構成するのに適したプラスチック材料としては、例えば結晶性ポリプロピレン、結晶性プロピレン－エチレン共重合体、結晶性ポリブテン－１、結晶性ポリ４－メチルペンテン－１、低－、中－、或いは高密度ポリエチレン、エチレン－酢酸ビニル共重合体（ＥＶＡ）、エチレン－アクリル酸エチル共重合体（ＥＥＡ）、イオン架橋オレフィン共重合体（アイオノマー）等のポリオレフィン類；ポリスチレン、スチレン－ブタジエン共重合体等の芳香族ビニル共重合体；ポリ塩化ビニル、塩化ビニリデン樹脂等のハロゲン化ビニル重合体；アクリロニトリル－スチレン共重合体、アクリロニトリル－スチレン－ブタジエン共重合体の如きニトリル重合体；ナイロン６、ナイロン６６、パラまたはメタキシリレンアジパミドの如きポリアミド類；ポリエチレンテレフタレート、ポリテトラメチレンテレフタレート等のポリエステル類；各種ポリカーボネート；ポリオキシメチレン等のポリアセタール類等の熱可塑性樹脂を挙げることができる。これらのプラスチック材料からなるフイルムは未延伸の、或いは一軸又は二軸延伸したフイルムとして用いられる。

【０００７】本発明の包装袋に使用するプラスチックフイルムは、これらのプラスチックフイルムを単層で、又は２種以上を積層して構成することができ、また、これ

らのプラスチックフイルムの１種又は２種以上と、アルミニウム等の金属箔、紙、セロファン等を貼合せて構成することも出来る。好ましいプラスチックフイルムとしては、例えば延伸ナイロンフイルムを外層とし、低密度ポリエチレン、ポリプロピレン等のポリオレフィンフイルムを内層とする二層構造のもの、延伸ポリエステルフイルムを外層とし、ポリオレフィンフイルムを内層とする二層構造のもの、およびこれらの内、外層フイルム間にアルミニウム等の金属箔を積層した三層構造のもの等が挙げられる。これらの積層フイルムを製造する際には、各層間に必要に応じてアンカー剤を介在させることもできる。

【０００８】プラスチックフイルムを単層とするか、又はどのような層構成のものとするかは、包装袋に充填する内容物の性状に応じて選択すればよく、例えば洗剤詰替え用包装袋のように低コストが求められるものには二層構造の積層フイルムを使用し、調味料やレトルト食品のように保存性を必要とする内容物を充填するレトルトパウチ用には、アルミニウム箔を含む三層以上の積層フイルムを使用すればよい。

【０００９】以下、図に基づいて本発明の包装袋の特徴についてさらに説明する。図１は本発明の包装袋の１例を示す全体図であり、図２は本発明の包装袋の他の例を示す全体図である。図３は図２の包装袋のＡ－Ａ線における断面図であり、図４は図１の包装袋の注出ノズル部の部分拡大図である。また、図５～図９はそれぞれ本発明の包装袋の他の例を示す注出ノズル部の部分拡大図である。そして、図１０は本発明の包装袋において、注出ノズル部に設ける開口補助機構の断面形状の例を示す図であり、図１１は注出ノズル部内及び／又はその近傍に設ける折れ曲がり防止機構の断面形状の例を示す図である。これらの図において、符号１は包装袋、符号２は注出ノズル部、符号３は切り欠き、符号４はヒートシール部、符号５は易開封加工部、符号６は底部、符号７，８は側壁、符号９は折返し辺、符号１０，１１は交点、符号１２は底部シール部、符号１３は開口補助機構、そして符号１４は折れ曲がり防止機構を表す。

【００１０】本発明の包装袋では、袋１の上方に注出ノズル部２を設けるが、この注出ノズル部２は図１にみられるように袋上方のコーナー部に設けることが好ましい。本発明では、注出ノズル部の少なくとも一方の側面に、包装袋の端縁線からの切り欠き量が３～１０ｍｍ、好ましくは５～７ｍｍである切り欠きを設けることを特徴とする。本発明で包装袋の端縁線からの切り欠き量とは、切り欠き部において包装袋の上端又は側端を延長した線からの最大の切り欠き深さ（図４におけるL_1又はL_2）を意味する。

【００１１】この切り欠き量が１０ｍｍより大きくなると、包装袋の内容物を注出する際に注出ノズル部が切り欠きの最深部近辺で折れ曲がり、注出口が閉じてしまい注出ができなくなる。また、切り欠き量が３ｍｍより小さい場合には、注出ノズル部の注出口が大きくなり、詰替え用の容器に挿入しにくくなる。したがって、注出ノズル部の折れ曲がりを防止し、詰替え用容器に容易に挿入できるとともに内容物を最後まで安定して取り出すためには、この切り欠き量を上記範囲のものとすることが必要である。

【００１２】この切り欠きは、図５にみられるように、注出ノズル部の一方の側面にのみ設けてもよく、また図４、６～９にみられるように、注出ノズル部の両側面に設けてもよい。この切り欠きの形状は、図４、５、７～９のように、曲線状のものとしてもよく、また図６のように、直線状のものとしてもよい。切り欠き量が上記範囲内にあれば、注出ノズル部の他の寸法や形状は、充填される内容物の種類や、容器の口部の寸法に応じて適宜設定すればよい。

【００１３】本発明の包装袋の形状に特に制限はなく、例えば三方シールや四方シールの平袋、スタンディングパウチ等が挙げられる。図２は本発明をスタンディングパウチに適用した１例を示す全体図であり、図３は図２のスタンディングパウチのＡ－Ａ線における断面図である。このスタンディングパウチは、逆Ｖ字状の底部６と底部６から上方に延びる２枚の側壁７、８の両側にヒートシール部４を設けた袋であり、底部６の折返し辺９とヒートシール部の交点１０、１１の内側の折返し辺９から斜め下方に延びる形状の底部シール部１２を有する自立性の袋である。

【００１４】本発明の包装袋では、また包装袋の注出ノズル部２に開口補助機構１３を設けることができる。注出ノズル部２に開口補助機構１３を設けることによって、内容物の注出時に注出ノズル部が閉ざされるのを防止することができ、また注出口の断面積が大きくなるので粘度の高い内容物でも注出が容易になる。

【００１５】開口補助機構１３の上面からみた形状、寸法や断面形状には特に制限はなく、上面からみた形状としては、例えば図６のような略三角形、図７のような略長方形、図８のような円形等任意の形状とすることができる。図６～９のように開口補助機構１３を袋の内方まで延長して設けた場合には、内容物の注出が一段と容易になるので好ましい。開口補助機構１３の断面形状には特に制限はなく、例えば図１０のＡ～Ｄに示すような外側に凸、Ｅに示すような内側に凸の形状とすることができる。この開口補助機構１３は図１０にみられるように、包装袋を形成するプラスチックフイルム（包材）の両側に形成することができ、また包材の片側のみに形成することもできる。

【００１６】本発明の包装袋では、さらに注出ノズル部内及び／又はその近傍に折れ曲がり防止機構１４を設けることができる。この折れ曲がり防止機構１４を設けることによって、内容物の注出時に注出ノズルが折れ曲が

り、流路を遮断することをさらに防止することができ、安定した注出方向と注出量を得ることができる。また、この折れ曲がり防止機構１４は、開口補助機構１３と併設してもよく、開口補助機構１３と併設する場合には、開口補助機構１３に隣接して又はその内部に設けることができる。折れ曲がり防止機構の設置数、上面からみた形状、寸法、断面形状等に特に制限はなく、１個又は２個以上の折れ曲がり防止機構１４を設けることができる。また、その上面から見た形状としては、例えば図７、図９のような棒状のものや、図８のように波形のものがあげられる。これらの折れ曲がり防止機構１４は１種類のものだけではなく、図９のように形状の異なる２種類以上の折れ曲がり防止機構１４を組み合わせて設ける構成とすることもできる。折れ曲がり防止機構１４の断面形状としては、例えば図１１のＦ、Ｇ及びＨに示すようなものが挙げられる。

【００１７】図１２～図１５は、さらに、本発明の他の実施例を示す図で、開口補助機構１３内に折れ曲がり防止機構１４を設けたものである。図１２の実施例においては、開口補助機構１３を矢筈状とし、中心部とその両側下方に折れ曲がり防止機構１４を設けたものである。また、図１３の実施例においては、三角形状の開口補助機構１３の傾斜角は、その頂角から底辺に引いた垂線が水平方向に対し４０～５０度となるようにし、その両側の二辺に沿ってほぼ平行に、折れ曲がり防止機構１４を設けたものである。そして、その断面は、図１４に示すように、幅広の開口補助機構１３内に、幅狭の折れ曲がり防止機構１４が設けられている。なお、これらの実施例においては、開口補助機構１３を矢筈状あるいは三角形状としたが、菱形状、長円状といった適宜の形状を採用することが可能であり、また、折れ曲がり防止機構１４の外形形状、断面形状、設ける角度等も、適宜選択して採用することが可能である。さらに、図１５に示すように、折れ曲がり防止機構１４を潰すか、折れ曲がり防止機構１４の内層をヒートシールして、強度を高めることも可能である。

【００１８】本発明の包装袋の注出ノズル部の側面に切り欠きを設ける方法には特に制限はなく、例えば常法により包装袋を構成するプラスチックフイルム（包材）をヒートシールした後に打ち抜き刃等で切断する、あらかじめ切り欠きを設けた包材をヒートシールする等の方法によればよい。

【００１９】また、本発明の包装袋に開口補助機構や折れ曲がり防止機構を設けるには、包装袋を構成する包材を製袋前に加熱し、所望形状の治具を押しつけてエンボス加工する方法や、真空や圧縮空気等を用いて深絞り成形し、その後冷却する方法を使用することができるが、操作の簡便性からはエンボス加工する方法が好ましい。この場合、包材を加熱する方法のほかに、所望形状の治具を高周波加熱やヒーター加熱のような種々の方法で加熱することもできる。必要により、開口補助機構及び／又は折れ曲がり防止機構を設けた包材は、製袋機により製袋し、内容物を充填後充填口をヒートシールして密封される。

【００２０】本発明の包装袋の注出ノズル部２には、包装袋の開封を容易にするために易開封加工部５を設けることができる。このような易開封加工部としては、例えば袋端部に形成するＩ形又はＶ形のノッチ、注出ノズル部を横断するミシン目やスコア、その他の薄肉弱化加工部が挙げられる。このような易開封加工部を形成する方法としては、（１）レーザー加工、（２）刃物、砥石等による機械加工、（３）ヒートバー等による熱加工、（４）コロナ放電やプラズマ放電等の放電加工等が挙げられる。注出ノズル部を横断するミシン目やスコアのような易開封加工部を形成する場合には、プラスチックフイルムを完全に貫通するような易開封加工部を形成すると、包装袋に充填される内容物の種類によっては内容物がもれたり、内容物充填後の落下強度が低下するので好ましくない。このような場合には、例えば積層フイルムを構成する外層フイルムのみに易開封加工を施す等により、このような問題の発生を防止することが好ましい。また、ミシン目やスコアを設ける場合、包装袋の縦軸に対し直角方向つまり水平方向に設けることが、注ぎ易さの点で好ましい。

【００２１】易開封加工部の形成は、例えばスリッター加工と同時に行うことができ、また製袋機による製袋時に行うこともできる。また、積層フイルムのラミネート前に外層を構成するフイルムにあらかじめ行うこともできる。包装袋に充填する内容物としては、液状のものだけではなく、さらさらした粉状や顆粒状の調味料、レトルト食品、化粧品や洗剤類等が挙げられる。

【００２２】

【実施例】つぎに、実施例により本発明を説明するが、これらの実施例は本発明を限定するものではない。

（実施例１～９）厚さ１５μの二軸延伸ナイロンフイルムと、厚さ１３０μの線状低密度ポリエチレン（ＬＬＤＰＥ）フイルムを、ウレタン系のアンカー剤を介してラミネートした積層フイルムに、製袋時に製袋後注出ノズルとなる部分の側面に図４の形状の切り欠きを形成し、常法によりヒートシールして液体洗剤及びボディーシャンプーを充填後密封した。実施例１～３では、包装袋の端縁線からの切り欠き量L_1及びL_2を変化させて、切り欠き量と注出時の注出状況との関係を検討した。実施例４～９では、製袋時に図７に示すような開口補助機構及び折れ曲がり防止機構を付加し、実施例１～３と同様にL_1及びL_2を変化させて注出状況を評価した。結果を表１に示す。表１において、開口補助機構や折れ曲がり防止機構の幅とは図１６におけるＷを、また深さとは同図におけるＤを意味する。

【００２３】

【表１】

	上面切り欠き L_1(mm)	側面切り欠き L_2(mm)	開口補助機構（幅×深さmm）	折れ曲がり防止機構（幅×深さmm）	ノズル部の折れ曲がり	中身のこぼれ	注出時間（秒） 洗剤（250ml）	注出時間（秒） シャンプー（400ml）
実施例1	3	3	なし	なし	なし	なし	16	27
2	6	6	〃	〃	〃	〃	15	26
3	10	10	〃	〃	〃	〃	16	26
4	3	3	10×8	2×2	〃	〃	10	20
5	5	6	〃	〃	〃	〃	11	19
6	7	10	〃	〃	〃	〃	10	21
7	3	0	〃	〃	〃	〃	10	23
8	6	0	〃	〃	〃	〃	11	22
9	10	0	〃	〃	〃	〃	11	24
比較例1	0	0	なし	なし	ボトル挿入不可	あり	13	32
2	1	0	〃	〃	〃	〃	15	35
3	15	0	〃	〃	ノズル折曲がり	なし	25	45
4	20	0	〃	〃	〃	〃	30	68

【００２４】表１に示すように実施例１～３の結果では、本発明の範囲で切り欠き量を設定すると、ノズル部を詰め替えボトル口に挿入できるためこぼすことなく移し替えができた。また、ノズル部が折れ曲がらず、詰め替えが迅速に行われた。実施例４～９の結果では、開口補助機構及び折れ曲がり防止機構があるため、注出時にノズル部の折れ曲がりがなく、ノズル断面積が大きくなっている分、注出時間が短縮された。これらの結果から、本発明によると包装袋のノズル部の折れ曲がりを防止して、かつ中身の移し替えが容易にできることが明らかになった。

【００２５】（比較例）実施例と同様な方法で製袋時に製袋後注出ノズルとなる部分の側面に切り欠きを形成し、常法によりヒートシールして液体洗剤及びボディーシャンプーを充填後密封した。包装袋の端縁線からの切り欠き量L_1及びL_2を変化させて、切り欠き量と注出時の注出状況との関係を検討した。結果を表１に示す。表１の結果から、本発明の範囲外の包装袋では注出ノズルを詰め替えボトル内に挿入できないで中身をこぼしたり、ノズル部が折れ曲がったりして詰め替えが容易に行われなかった。

【００２６】本発明の包装袋の包材となるプラスチックフイルムを構成する各フイルムの厚さや種類、組合せ等は、目的とする詰替え用包装袋の性状に応じて幅広く選択することができるものであり、上記各実施例に記載されたものに限定されるものでないことは、いうまでもない。

【００２７】

【発明の効果】本発明の包装袋は、注出ノズル部の少なくとも一方の側面に、包装袋の端縁線からの切り欠き量が３～１０mmである切り欠きを設けることによって、内容物の注出時に注出ノズルの折れ曲がりを防止し、粘度の高い内容物でも最後まで容易に安定して注出することができる。また、詰替え用の容器内に注出ノズルを容易に挿入し固定することができるので、内容物をこぼさずに注出することができる。さらに、包装袋に開封補助機構を設けることにより、開封時に断面積の大きい注出口を容易に形成することができるとともに、折れ曲がり防止機構を設けることにより注出口の折れ曲がりをさらに防止し、最後まで安定した流れを保ちながら内容物を容易に取り出すことができるものである。また、特別な工程を必要とせずに安価に製造することができ、輸送や保管時にもかさばらず、注出ノズル部に易開封加工部を設けることによって、手で容易に開封することが可能となるものであり、きわめて実用的価値が高い。

【図面の簡単な説明】

【図１】本発明の包装袋の１例を示す全体図である。

【図２】本発明の包装袋の他の例を示す全体図である。

【図３】図２の包装袋のＡ－Ａ線での断面図である。

【図４】本発明の包装袋の注出ノズル部の部分拡大図である。

【図５】本発明の包装袋の他の例を示す注出ノズル部の部分拡大図である。

【図６】本発明の包装袋の他の例を示す注出ノズル部の部分拡大図である。

【図７】本発明の包装袋の他の例を示す注出ノズル部の部分拡大図である。

【図８】本発明の包装袋の他の例を示す注出ノズル部の部分拡大図である。

【図９】本発明の包装袋の他の例を示す注出ノズル部の部分拡大図である。

【図１０】包装袋の注出口に設ける開口補助機構の断面形状を示す図である。

【図１１】包装袋の注出ノズル部内及び／又はその近傍に設ける折れ曲がり防止機構の断面形状を示す図であ

9　　10

る。

【図１２】本発明の包装袋のさらに他の例を示す注出ノズル部の部分拡大図である。

【図１３】本発明の包装袋のさらに他の例を示す注出ノズル部の部分拡大図である。

【図１４】包装袋の開口補助機構部に併設して折れ曲がり防止機構部を設けた場合の断面形状を示す図である。

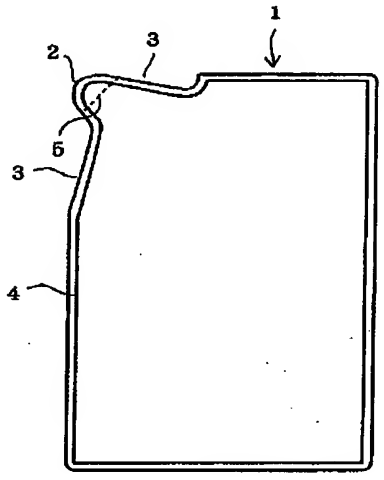
【図１５】包装袋の開口補助機構部に併設して折れ曲がり防止機構部を設けた場合の他の例の断面形状を示す図である。

【図１６】包装袋に設ける開口補助機構又は折れ曲がり防止機構の幅及び深さを示す図である。

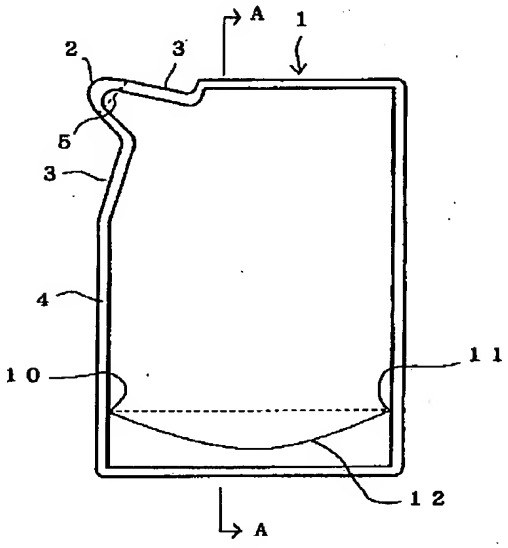
【符号の説明】

＊１　詰替え用包装袋
２　注出ノズル部
３　切り欠き
４　ヒートシール部
５　易開封加工部
６　底部
７，８　側壁
９　折返し辺
１０，１１　交点
１２　底部シール部
１３　開口補助機構
１４　折れ曲がり防止機構

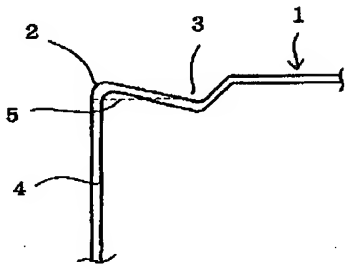
【図１】



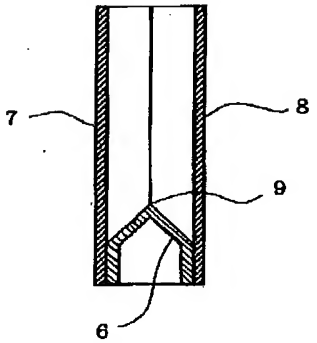
【図２】



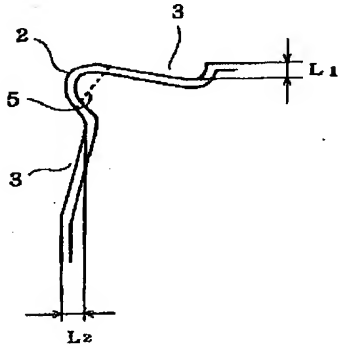
【図５】



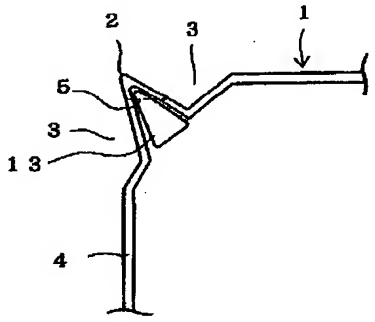
【図３】



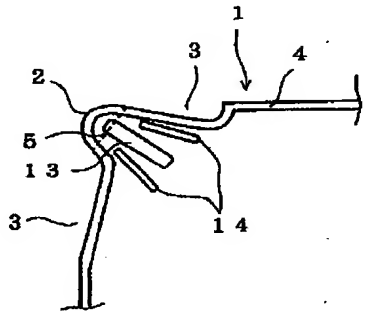
【図４】



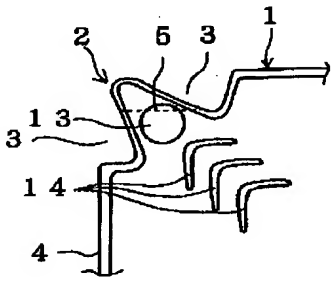
【図６】



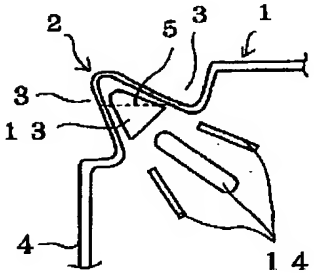
【図７】



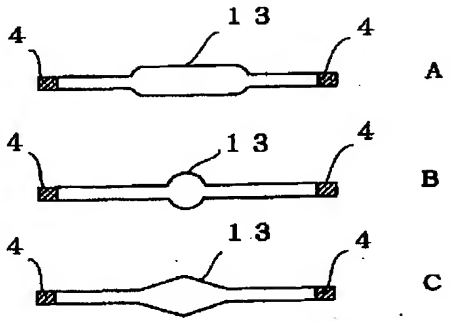
【図８】



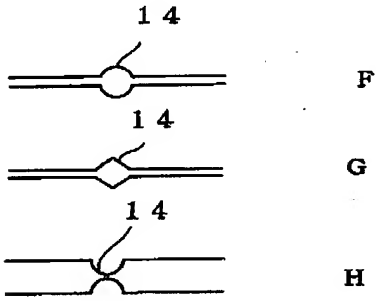
【図９】



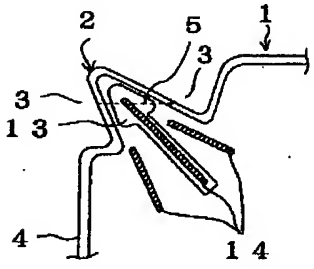
【図１０】



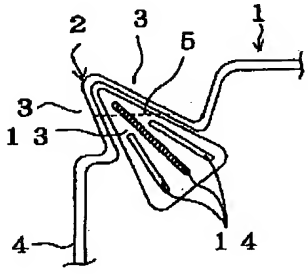
【図１１】



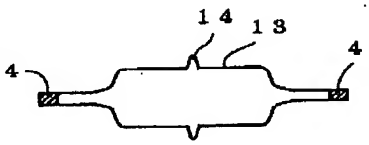
【図１２】



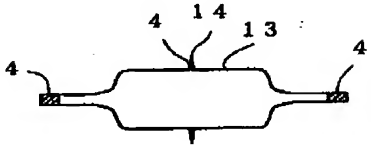
【図１３】



【図１４】



【図１５】



【図１６】